

REMARKS

Claims 1-4 and 6-12 are in this application.

Claim 1 has been amended to overcome the rejection under 35 USC 112, second paragraph. It is respectfully requested that this rejection be withdrawn.

Claims 1-4 and 6-11 are rejected under 35 USC 103(a) as being unpatentable over Yoo, (US 2005/0080280 corresponds to WO 03/066567) in view of Hayafuji et al. in view of Yean et al. (Applied Organometallic Chemistry, 2000, vol. 14) and further in view of Caiudelli (US 4,567,037). This is respectfully traversed.

Applicants respectfully disagree with the Examiner's description of the only differences between the claimed invention and the description of Yoo. In the present invention the fatty acids can be in the form of free fatty acids or glycerol or combinations thereof. In the present invention esterification of free fatty acids and transesterification of glycerides occur simultaneously in one step. This differs from Yoo as the process described in Yoo is only applicable for transesterification of fatty acid glycerides. Paragraph [0018] of Yoo describes a process for transesterification of glycerides. Paragraph [0044] also only describes transesterification. It does

not describe nor suggest simultaneous esterification of free fatty acids and transesterification of fatty acid glycerides. Furthermore, the catalyst used in Yoo is an alkali catalyst. See for example, paragraph [0015] that describes use of a metal hydroxide catalyst and paragraph [0040] that describes use of an alkali catalyst.

The process described in Hayafugi et al. differs from the claimed process in that the claimed process does not require any pretreatment. In the claimed process the fatty acids and the triglycerides can be converted into fatty acid alkyl esters without pretreatment. The catalyst in Hayafugi is alkaline and therefore, neutralization is required in Hayafugi.

Ciaudelli describes the preparation of fatty acid diesters used in cosmetics. The process described in an esterification reaction where the water is removed in a Dean-Stark trap. As stated above, in the claimed process, water formed in the reaction does not affect the overall conversion of triglycerides into the fatty acid alkyl esters.

Yean is a scientific paper that has a narrow focus on the potential of diorganotin compounds to function as neutral and non-corrosive catalysts in the methanolysis of tripalmitin to methyl palmitate. There is no suggestion in this paper that tin catalysts can be used where the starting material is not pure or is a mixture of materials. Other differences between the invention claimed in this application and Yean were discussed in the prior response.

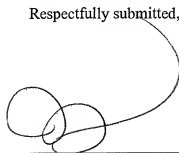
According to the U.S. Supreme Court in KSR v Teleflex and as included in the Examination Guidelines for Determining Obviousness Under 35 USC 103 “[R]ejections on obviousness cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.”

To establish a prima facie case of obviousness, three basic criteria must be met. . First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. There is no combination of the references that discloses, teaches or suggests a process for the preparation of fatty acid alkyl esters suitable for use as biodiesel from a starting material of fatty acid glycerides selected from the group consisting of vegetable oils, animal oils, fats and, fatty acids and a mixture thereof wherein esterification of the fatty acid and transesterification of the triglycerides is carried out simultaneously, wherein the fatty acid glycerides and fatty acid present in it are reacted with an alcohol having 1-4 carbon atoms in a molar ratio of 3:1 to 30:1 of fatty acids to triglycerides respectively, at a temperature ranging between 70-300°C, pressure in a range of 1-30 bar, in presence of a organometallic catalytic compound of tin wherein the

concentration of catalyst is in a range of 0.01 to 3 weight percent of the fatty acid glycerides; the the glycerol is separated from the fatty acid alkyl ester, the fatty acid alkyl esters are purified by washing with water, and the washed ester is purified by treating with a basic adsorbent to obtain biodiesel. Since this has not been shown, in respect of the cite art, it is respectfully requested that the rejection be withdrawn.

It is submitted that the application is in condition for allowance and favorable consideration is respectfully requested.

Respectfully submitted,

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